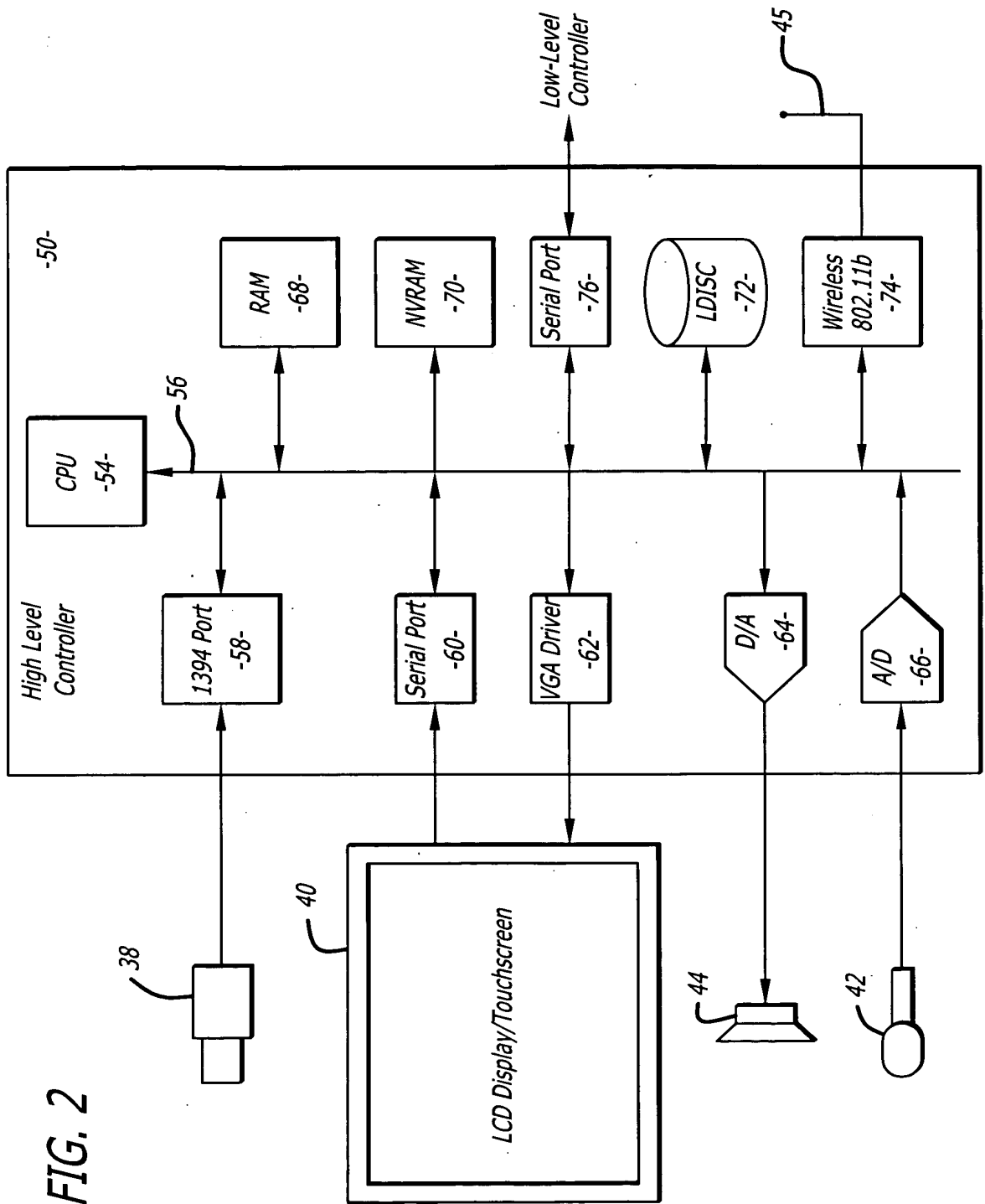
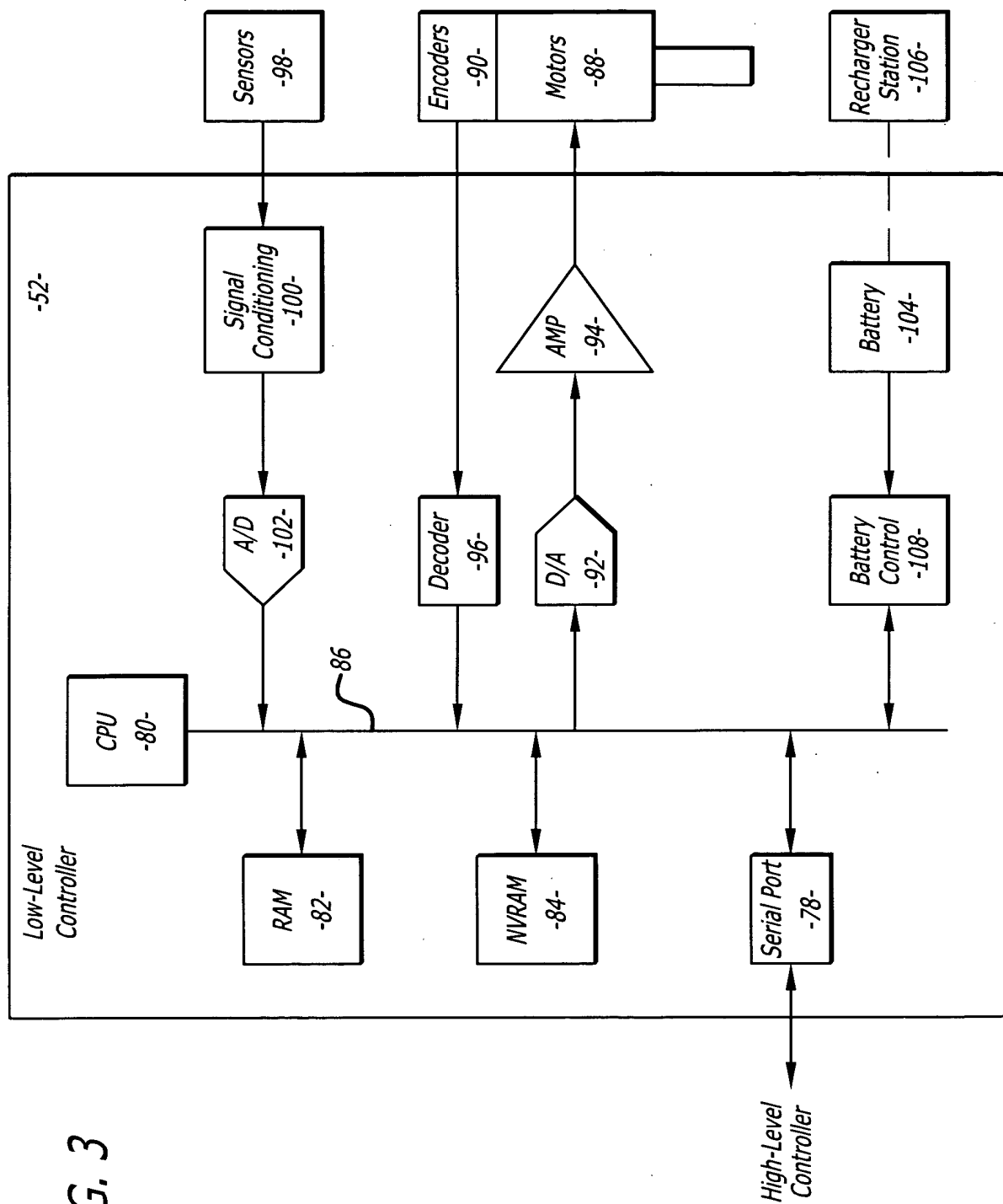


FIG. 1

FIG. 2



The diagram illustrates the internal architecture of the Low-Level Controller (LLC). A central horizontal bus, labeled 86, connects various components. On the left, the CPU (-80-) is connected to the bus. Below the bus, RAM (-82-) and NVRAM (-84-) are connected via bidirectional arrows. To the right of the bus, several modules are connected: an A/D converter (-102-) receives input from Sensors (-98-) and outputs to the bus; a Signal Conditioning module (-100-) receives input from the A/D converter and outputs to the bus; a Decoder (-96-) receives input from the bus and outputs to Encoders (-90-); a D/A converter (-92-) receives input from the bus and outputs to an AMP (-94-), which then drives Motors (-88-); a Battery Control module (-108-) is connected to the bus and a Battery (-104-); and a Recharger Station (-106-) is connected to the Battery. A Serial Port (-78-) is also connected to the bus and the High-Level Controller. The entire LLC is shown as a single block with a dashed line indicating its connection to the High-Level Controller.



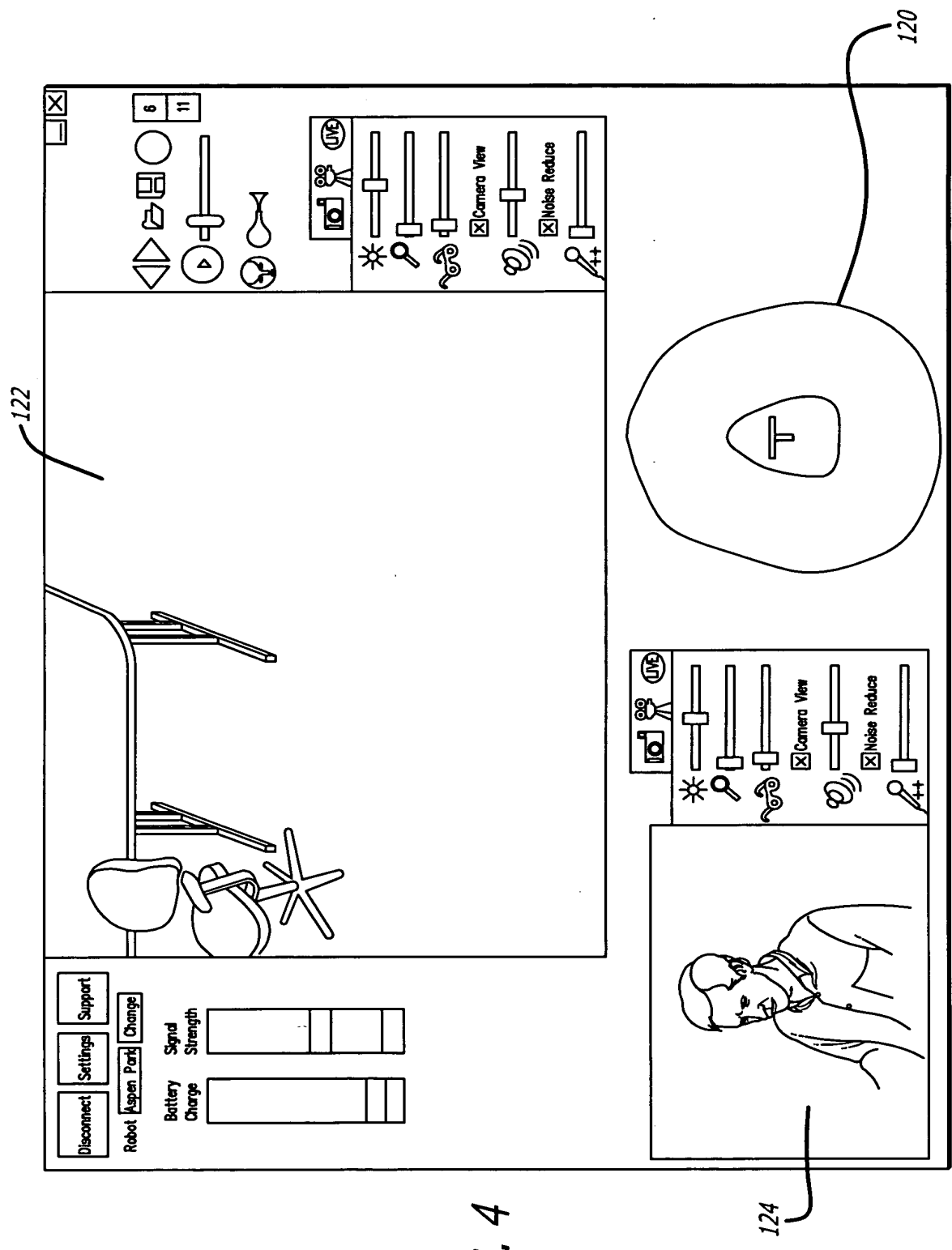


FIG. 4

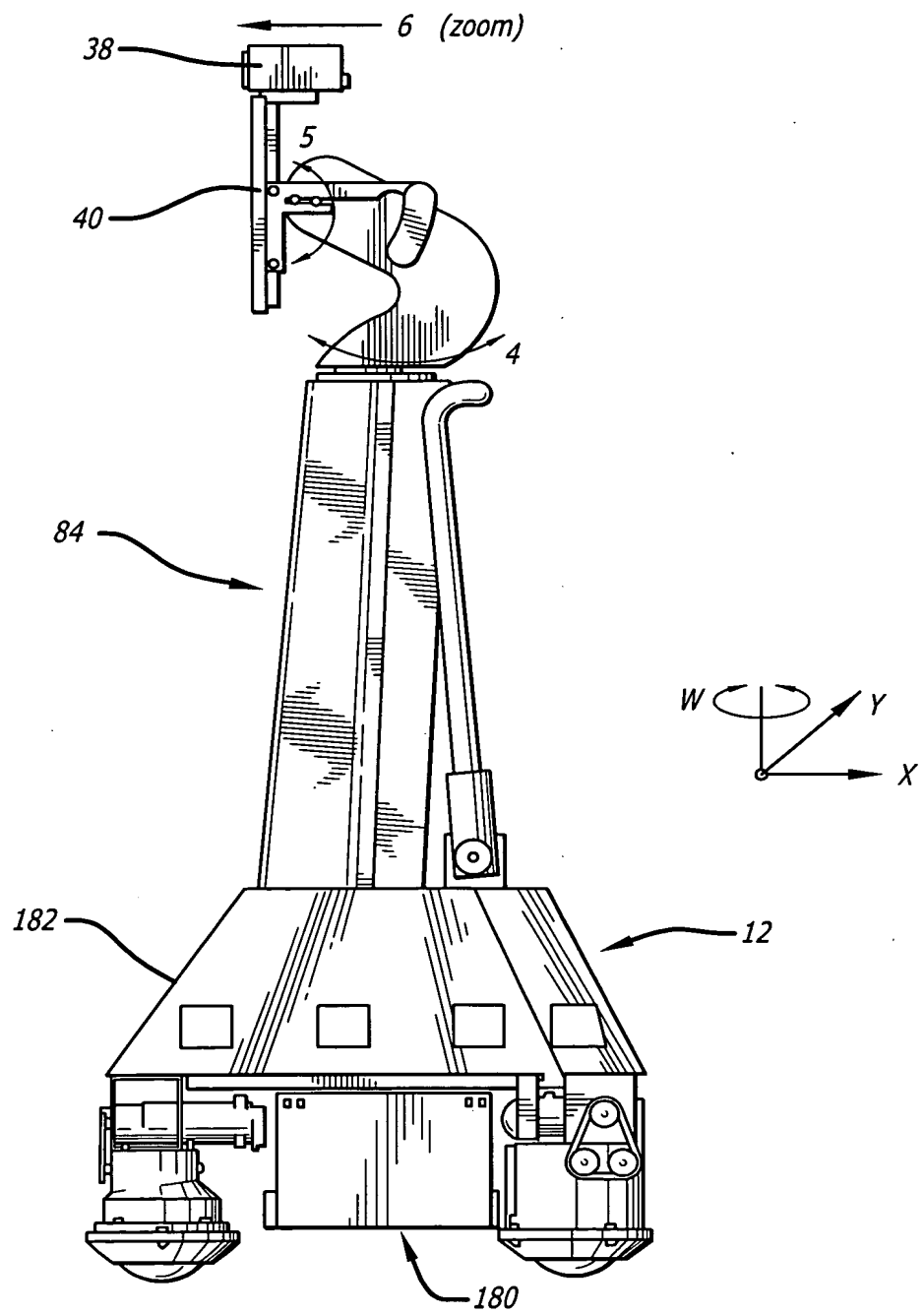


FIG. 5

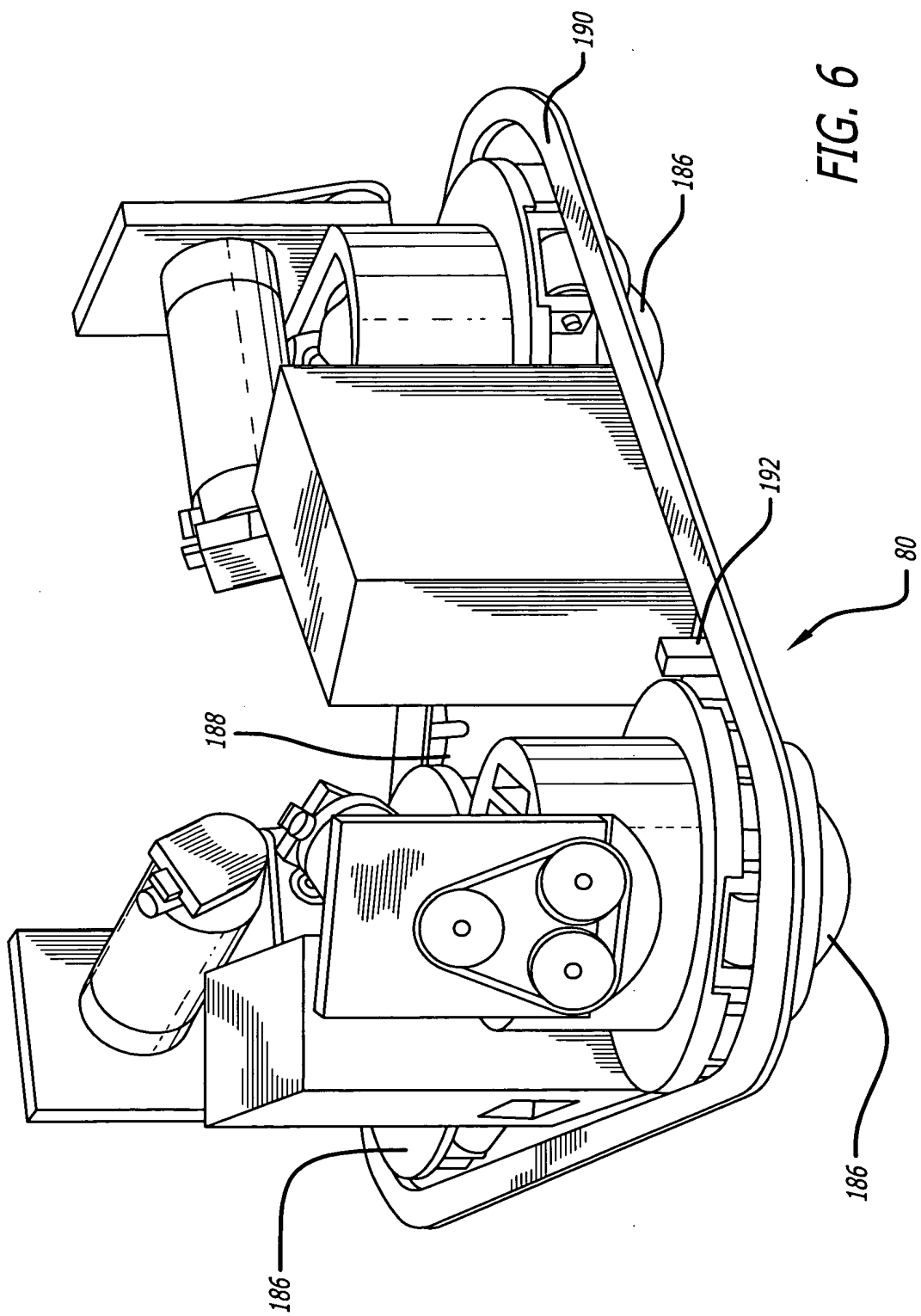
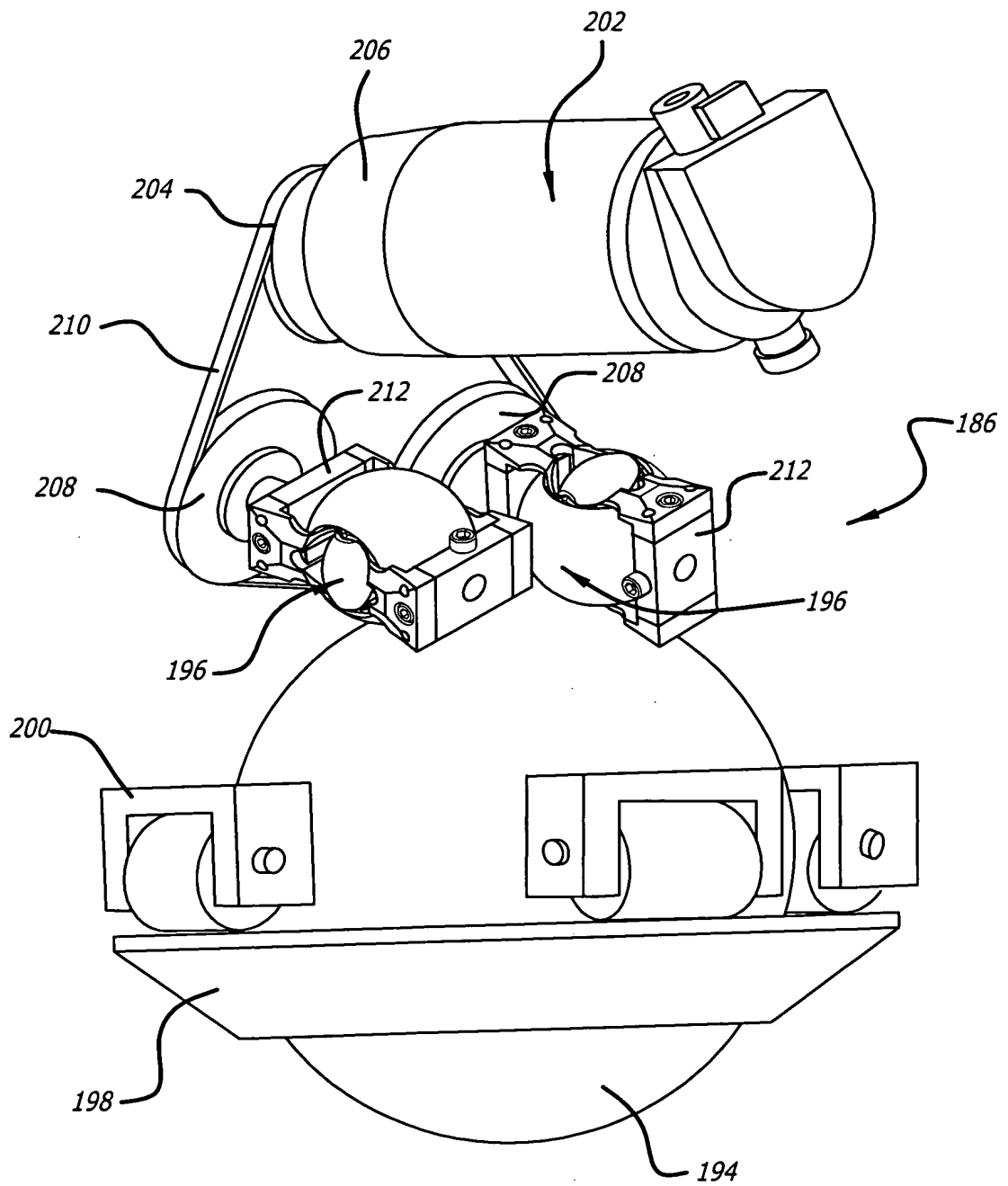
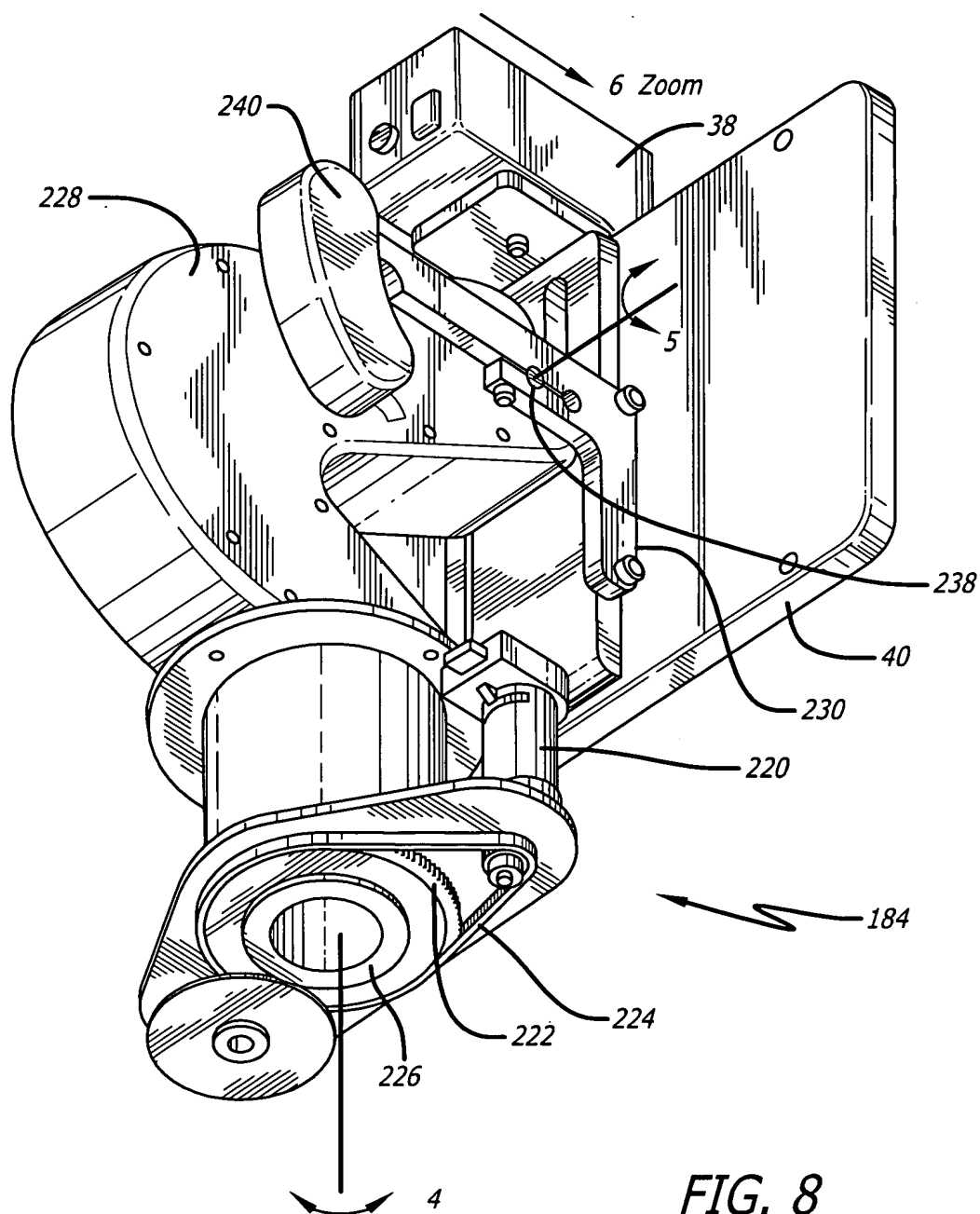


FIG. 7







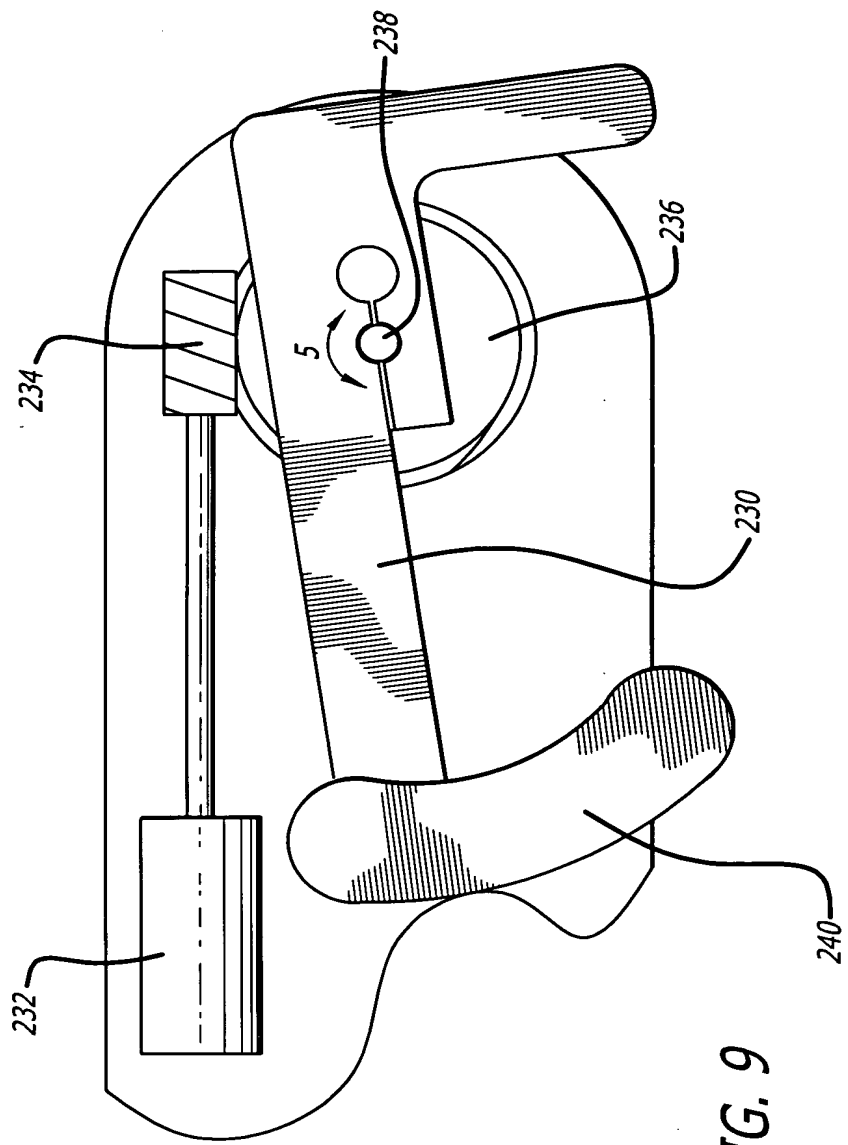


FIG. 9

FIG. 10

